Complete Summary

GUIDELINE TITLE

Improving the nutrition of pregnant and breastfeeding mothers and children in low-income households.

BIBLIOGRAPHIC SOURCE(S)

National Institute for Health and Clinical Excellence (NICE). Improving the nutrition of pregnant and breastfeeding mothers and children in low-income households. London (UK): National Institute for Health and Clinical Excellence (NICE); 2008 Mar. 105 p. (Public health guidance; no. 11). [48 references]

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

- Pregnancy
- Poor nutrition

GUIDELINE CATEGORY

Counseling
Management
Prevention
Risk Assessment

CLINICAL SPECIALTY

Family Practice
Nursing
Nutrition
Obstetrics and Gynecology
Pediatrics
Preventive Medicine

INTENDED USERS

Advanced Practice Nurses
Dietitians
Health Care Providers
Nurses
Pharmacists
Physician Assistants
Physicians
Public Health Departments
Social Workers

GUIDELINE OBJECTIVE(S)

To evaluate the effectiveness and cost-effectiveness of public health interventions to improve nutrition of pregnant women, breastfeeding mothers, and infants and children in low-income households

TARGET POPULATION

- Women who are pregnant or may become pregnant
- Breastfeeding mothers
- Parents of infants and children under age 5 years, including children under age 4 years who may be eligible for Healthy Start benefit
- Health professionals and support workers who care for infants and children under age 5 years
- Infants and children up to 5 years of age

Note: This guideline focuses particularly on pregnant women, mothers and children from low-income or other disadvantaged backgrounds.

INTERVENTIONS AND PRACTICES CONSIDERED

1. Training of professionals for providing nutrition advice and support to women who are pregnant or who may become pregnant, breastfeeding mothers, and parents and others who care for infants and children under age 5 years
2. Nutrition during pregnancy
    - Balanced diet
    - Dietary supplementation
        - Folic acid
        - Vitamin D
    - Overweight and obesity
3. Maternal nutrition after pregnancy
    - Healthy diet
    - Prescription drugs

- History of allergies

4. Infant and child nutrition
    - Nutritional needs
    - Promotion of and support for breastfeeding
    - Use of infant formula
    - Health Start program
    - Child health promotion
        - Weighing regularly
        - Breastfeeding in public places
        - Support at home
        - Preschool settings
        - Universal services
    - Healthy family nutrition

MAJOR OUTCOMES CONSIDERED

- Prescription rates for vitamin D and folic acid supplements
- Rate of exclusive breastfeeding
- Rate of mixed feeding
- Rate of Health Start enrollment
- Incidence of low birth weight
- Incidence of neural tube defects
- Incidence of rickets

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Key Questions

Key questions were established as part of the scope. They formed the starting point for the reviews of evidence and facilitated the development of recommendations by the Programme Development Group (PDG). Refer to appendix B in the original guideline document for a list of key questions.

Reviewing the Evidence of Effectiveness

Eight reviews of effectiveness and three expert papers were conducted to inform the development of this guidance.

Identifying the Evidence

The following searches were carried out for each effectiveness review, as follows.

Review 1 - The effectiveness of public health interventions to promote nutrition of pre-conceptional women.

The following databases were searched for systematic reviews (from 1995 onwards): the Cochrane Database of Systematic Reviews (CDSR), and the Database of Abstracts of Reviews of Effects (DARE), the Health Technology Assessment Database and the Ongoing Reviews Register. A number of websites were also scanned/searched to identify relevant reviews. Where no relevant systematic reviews existed, the following databases were searched for randomised controlled trials (RCTs) (from 1990 onwards): CENTRAL, EMBASE, PsycINFO, CINAHL and MEDLINE. For other types of UK study, the following databases were searched: MEDLINE, EMBASE, CINAHL and PsycINFO.

Review 2 - Review of the effectiveness of interventions to improve the nutrition of pregnant women with a focus on the nutrition of pregnant women in low-income households.

The following databases were searched for systematic reviews (from 1995 onwards): CDSR and DARE. Where no relevant systematic reviews existed, the following databases were searched for RCTs (from 1990 onwards): the Cochrane Central Register of Controlled Trials, MEDLINE, EMBASE, CINAHL and PsycINFO. For other types of UK study (from 1990 onwards) the following databases were searched: MEDLINE, EMBASE, CINAHL and PsycINFO databases were searched.

Review 3 - The effectiveness of public health interventions to improve the nutrition of postpartum women.

The following databases were searched for systematic reviews (from 1995 onwards): CDSR, DARE, National Research Register (including CRD Ongoing Reviews), Health Technology Assessment Database, Scottish Intercollegiate Guideline Network (SIGN) Guidelines, National Guideline Clearinghouse, National Coordinating Centre for Health Technology Assessment, HSTAT, the Department of Health (DH) Research Findings Electronic Register, TRIP, Clinical Evidence, and Health Evidence Bulletins Wales. The following databases were searched for RCTs and UK studies of other types (from 1990 onwards): CENTRAL, EMBASE, PsycINFO, CINAHL and MEDLINE. A search was also conducted of NICE web pages (published appraisals).

Review 4 - The effectiveness of public health interventions to promote safe and healthy milk feeding practices in babies.

The following databases were searched for systematic reviews (from 1995 onwards): CDSR (Issue 2 2006), DARE, the Health Technology Assessment Database and Ongoing Reviews Register. The following databases were searched for RCTs (from 1990 onwards): MEDLINE, EMBASE, CENTRAL, CINAHL and PsycINFO.

Review 5 - The effectiveness of public health interventions to improve the nutrition of young children aged 6 to 24 months.

The following databases were searched for systematic reviews (from 1995 onwards): CDSR, DARE, National Research Register (including CRD Ongoing Reviews), National/Health Technology Assessment Database, SIGN Guidelines, National Guideline Clearinghouse, DH Research Findings Electronic Register, TRIP Clinical Evidence and Health Evidence Bulletins Wales. The following databases were searched for RCTs (from 1990 onwards): CENTRAL, EMBASE, PsycINFO, CINAHL and MEDLINE. In addition, a search was carried out of the National Coordinating Centre for Health Technology Assessment NICE web pages (published appraisals).

Review 6 - The effectiveness of public health interventions to improve the nutrition of 2 to 5 year old children.

The following databases were searched for systematic reviews (from 1995 onwards): CDSR, DARE, National Research Register (including CRD Ongoing Reviews), National/Health Technology Assessment Database, SIGN Guidelines, National Guideline Clearinghouse, DH Research Findings Electronic Register, TRIP Clinical Evidence and Health Evidence Bulletins Wales. The following databases were searched for RCTs (from 1990 onwards): CENTRAL, EMBASE, PsycINFO, CINAHL and MEDLINE. In addition, a search was carried out of the National Coordinating Centre for Health Technology Assessment NICE web pages (published appraisals).

Review 7 - The effectiveness and cost-effectiveness of interventions to promote an optimal intake of vitamin D to improve the nutrition of pre-conceptional, pregnant and postpartum women and children in low-income households.

The following databases were searched from 1966 to 2006: MEDLINE, EMBASE, CINAHL, CCTR, CDSR, DARE and AMED. The search was not limited by study type, but was restricted to studies in developed countries and published in English language. Reference lists of identified articles were also checked.

Review 8 - Supplementary evidence review on the effectiveness of public health interventions to improve the nutrition of infants/children aged 6 months to 5 years.

A non-systematic review was conducted. Studies of corroborative evidence such as surveys, qualitative studies, cohort studies, case-control studies, case-series and expert opinions were identified. The following databases were searched (from 1966 to 2006): MEDLINE, EMBASE, CINAHL, CCTR, CDSR, DARE and AMED. In addition, a 'snowball' search of the internet was carried out and included the websites run by the following: DH, Health Education Authority, MAFF, FCA, DEFRA, WHO and UNICEF. A hand/document search from reference studies and a search of the grey literature was also conducted.

Expert Papers

The two expert papers on the safe storage of expressed breast milk and growth monitoring draw on published research in addition to expert opinion.

The expert paper on nutrition and breastfeeding draws on nationally published data from surveys and published scientific evidence on maternal nutrition and breast milk volume and composition.

Further details of the databases, search terms and strategies are included in the review reports (see the "Availability of Companion Documents" field).

Selection Criteria

Inclusion and exclusion criteria for each review varied and details can be found at www.nice.org.uk/PH011. However, in general:

Review 1 included: systematic reviews from 1990 onwards, RCTs from 1990 onwards published worldwide in English and non-randomised studies (cohorts, qualitative studies and surveys) conducted from 1990 and published in the UK. It focused on interventions for non-pregnant women of childbearing age who were planning a pregnancy or who might become pregnant. The interventions had to start prior to conception but could continue or stop at any time during the pregnancy.

Review 2 included: systematic reviews published since 1995; RCTs from 1990 onwards published worldwide in English and non-randomised UK studies from 1990 onwards, with a particular focus on nutrition interventions aimed at low-income women during pregnancy.

Review 3 included: systematic reviews from 1995 onwards, RCTs from 1990 onwards published worldwide in English, and UK studies of all interventions aiming to improve the nutrition of women during the first year after birth. Studies had to examine women up to 6 weeks after giving birth (postpartum) and living in developed countries, from any socio-economic background. Where data were available, the review also considered interventions on disadvantaged population subgroups.

Review 4 included: systematic reviews from 1995 onwards, RCTs from 1990 onwards published worldwide in English, and other UK studies. It focused on interventions to:

- Promote the initiation, and increase the duration of, breastfeeding
- Reduce the risk of contamination of feeding equipment
- Ensure breast milk is safely stored and reheated
- Reduce the risks associated with the reconstitution of formula milk

Review 5 included: systematic reviews from 1995 onwards, RCTs from 1990 onwards and non-randomised studies conducted in the UK and published from 1990 onwards. It focused on interventions to promote safe and healthy feeding practices for infants and young children who are moving from an exclusively milk-based diet to solid food.

Review 6 included: systematic reviews from 1995 onwards published worldwide in English, RCTs from 1990 onwards conducted in developed countries, and other study types conducted in the UK and published from 1990 onwards. It focused on

interventions aimed at children aged 2 to 5 years old, their parents and carers, and staff looking after 2 to 5 year olds in nurseries and other day care settings.

Review 7 included: all types of studies conducted in the UK, and systematic reviews and RCTs carried out in developed countries. Only papers published in English between 1966 and 2006 were considered. It focused on interventions promoting vitamin D intake, in line with the Committee on Medical Aspects of Food and Nutrition Policy (COMA) recommendations on vitamin D. The interventions had to be aimed at one of the following:

- Women who were planning a pregnancy, were pregnant or had given birth in the previous year
- Infants and young children (from birth up to age 5 years)
- Vulnerable groups (with a particular emphasis on black and minority ethnic groups)

Review 8 included: primary studies (cohort and case-control studies, case-series and expert opinions). It focused on corroborative evidence on interventions to improve the nutrition of infants/children aged 6 months to 5 years. (The corroborative evidence related to the process and context of interventions.)

Economic Appraisal

The economic appraisal consisted of two economic effectiveness reviews and an economic appraisal.

Reviews of Economic Evaluation

The following databases were searched: MEDLINE, EMBASE, CINAHL, CCTR, CDSR, DARE and NHSEED. The search strategy combined relevant terms relating to:

- Pre-conceptual, pregnant and postpartum women
- Children up to age 5 years

The search incorporated a sensitive health economics filter and focused on interventions rather than being restricted to outcomes.

In selecting studies for the review, the main exclusion criteria were as follows:

- Primary studies set in developing or low-income countries
- Studies published before 1990
- Papers in a language other than English
- Papers not held at the British Library
- Abstracts

NUMBER OF SOURCE DOCUMENTS

Effectiveness

Not stated

Economic Appraisal

A total of 24 articles were included in the pre-conceptual, pregnant and postpartum women review. Nine articles were included in the children 0 to 5 years review.

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Study Type

- Meta-analyses, systematic reviews of randomised controlled trials (RCTs) or RCTs (including cluster RCTs)
- Systematic reviews of, or individual, non-RCTs, case-control studies, cohort studies, controlled before-and-after (CBA) studies, interrupted time series (ITS) studies, correlation studies
- Non-analytical studies (for example, case reports, case series)
- Expert opinion, *formal consensus*

Study Quality

++ All or most of the criteria have been fulfilled. Where they have not been fulfilled the conclusions are thought very unlikely to alter

+ Some criteria have been fulfilled. Those criteria that have not been fulfilled or not adequately described are thought unlikely to alter the conclusions

- Few or no criteria fulfilled. The conclusions of the study are thought likely or very likely to alter

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Effectiveness

Quality Appraisal

Included papers were assessed for methodological rigour and quality using the NICE methodology checklist, as set out in the NICE technical manual 'Methods for development of NICE public health guidance' (see appendix E of the original guideline document). Each study was described by study type and graded (++, +, -) to reflect the risk of potential bias arising from its design and execution.

The studies were also assessed for their applicability to the UK.

Summarising the Evidence and Making Evidence Statements

The review data was summarised in evidence tables (see evidence tables and the synopsis).

The findings from the reviews were synthesised and used as the basis for a number of evidence statements relating to each key question. The evidence statements reflect the strength (quantity, type and quality) of evidence and its applicability to the populations and settings in the scope.

Economic Appraisal

Studies were assessed for their methodological rigour and quality using the critical appraisers' checklist provided in appendix B of the "Methods for development of NICE public health guidance" (see the "Availability of Companion Documents"). Each study was categorised by study type and graded using a code (++), (+) or (-), based on the potential sources of bias.

Cost-Effectiveness Analyses

An economic model was constructed to incorporate data from the reviews of effectiveness and cost effectiveness of breastfeeding. The model also considered various interventions to increase breastfeeding rates, particularly peer support schemes. Sensitivity analysis was used to investigate how these different scenarios affect cost effectiveness. The results are reported in: "Modelling the cost-effectiveness of breastfeeding support". They are available on the NICE website at: www.nice.org.uk/PH011.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Informal Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

How the Programme Development Group (PDG) Formulated the Recommendations

At its meetings held between March 2006 and September 2007, the PDG considered the evidence of effectiveness and cost effectiveness to determine:

- Whether there was sufficient evidence (in terms of quantity, quality and applicability) to form a judgement
- Whether, on balance, the evidence demonstrates that the intervention is effective or ineffective, or whether it is equivocal
- Where there is an effect, the typical size of effect

The PDG developed draft recommendations through informal consensus, based on the following criteria:

- Strength (quality and quantity) of evidence of effectiveness and its applicability to the populations/settings referred to in the scope
- Effect size and potential impact on population health and/or reducing inequalities in health
- Cost effectiveness
- Balance of risks and benefits
- Ease of implementation and the anticipated extent of change in practice that would be required

The PDG also considered whether a recommendation should only be implemented as part of a research programme, where evidence was lacking.

Where possible, recommendations were linked to an evidence statement(s) (see appendix C of the original guideline for details). Where a recommendation was inferred from the evidence, this was indicated by the reference 'IDE' (inference derived from the evidence).

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

The following are brief summaries of economic reviews and appraisals. Refer to the "Availability of Companion Documents" field for links to the full reports as well as a link to a "costing statement" on maternal and child nutrition.

Modelling the Cost-effectiveness of Breastfeeding Support

An economic model was constructed to incorporate data from the reviews of effectiveness and cost effectiveness.

This model essentially utilises a "what if" approach. It uses the literature to derive assumptions about the relationship between breastfeeding and health outcomes and, in particular, the "downstream costs" of those outcomes. It then explores the cost-effectiveness of interventions by developing "what if scenarios" for a given cost of intervention, population size and estimated impact of the intervention on breastfeeding initiation.

With baseline data and assumptions the model suggests that an investment of 20,000 pounds sterling in a peer support scheme of this type produces net societal savings of 5,500 pounds sterling, after "downstream savings" from increased breastfeeding initiation and duration are taken into account. In addition the model suggests that the scheme would avert 0.057 cases of pre-menopausal breast cancer in mothers (2.7 cases per 10,000) and almost 6 cases (285 cases per 10,000) of infections requiring hospitalisation in the first year of life. However, as the scheme is estimated to produce net cost-savings without considering these additional benefits, it is not necessary to convert the additional benefits to quality-adjusted life years (QALYs).

A scheme to increase breastfeeding, costing about 100 pounds sterling per mother, will break even in terms of lower feeding costs and reduced future hospital admissions if there is about a 20 percentage-point increase in initiation rates of breast-feeding. (This does not take account of lower rates of breast cancer of the mother, the trauma of hospitalisation of the infant, or the opportunity cost of the alternative use of scarce health-care resources.) For a 30 percentage point increase in initiation, the gain to society for each initiating mother is about 400 pounds sterling (about 125 pounds sterling averaged over all mothers) compared with the 100 pounds sterling cost per mother of the scheme. If the health gains for both mother and child are considered, a scheme costing 100 pounds sterling per mother and yielding breastfeeding initiation rate increases of a little less than 20 percentage points is likely to be cost effective.

Refer to 'Modelling the cost-effectiveness of breastfeeding support' document available on the NICE website at: www.nice.org.uk/PH011 for more information on cost analysis.

Rapid Economic Review of Public Health Interventions Designed to Improve the Nutrition of Pre-Conceptual, Pregnant, and Post Partum Women

It is recognized that that nutritional status before and during pregnancy, in the post partum period and breastfeeding, and in the early years of life is important to the short and long term health of the mother, the development of the foetus and as a foundation of health for the infants later life. However, there are concerns that nutritional status is sub-optimal, especially in lower socioeconomic groups.

The literature review suggested that there is a paucity of good quality economic studies on public health interventions of this type. Furthermore, much of what is published relates to a non-UK context and the conclusions of such studies may not be readily generalised to a different setting. The review also highlighted the methodological problem of assessing the cost-effectiveness of public health interventions which include some nutritional aspect as just one part of a bigger overall package. With such interventions it can be difficult to attribute the observed effects to each constituent part.

Notwithstanding these caveats, there is some evidence from outside the UK to support the cost-effectiveness of folic acid supplementation. However, there is little published data on the cost-effectiveness of different interventions to increase uptake of folic acid.

One study suggests that home-based nurse lactation consultants are more cost-effective than hospital-based lactation consultants in promoting breast feeding.

Finally, evidence from the US indicates that the provision of supplemental food to low income pregnant, breast feeding and post partum women is cost-effective, especially in black women.

Rapid Economic Review of Public Health Interventions Designed to Improve the Nutrition of Children aged 0-5 Years

It is recognized that that nutritional status is a foundation of health for the infant's later life. However, there are concerns that nutritional status is suboptimal, especially in lower socioeconomic groups.

The literature review indicated a dearth of good quality economic studies in this area. Furthermore, much of what is published relates to a non-UK context and the conclusions and costs from such studies may not be readily generalised to a different setting.

There is published literature which indicates that increased breastfeeding rates could produce cost savings by reducing various childhood diseases.

However, there is little good quality evidence on the cost-effectiveness on interventions which aim to increase breastfeeding.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The guideline was validated through two consultations.

1. The first draft of the guideline (The full guideline, National Institute for Clinical Excellence (NICE) guideline and Quick Reference Guide) were consulted with Stakeholders and comments were considered by the Guideline Development Group (GDG)
2. The final consultation draft of the Full guideline, the NICE guideline and the Information for the Public were submitted to stakeholders for final comments.

The final draft was submitted to the Guideline Review Panel for review prior to publication.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The recommendations in this section are presented without any reference to evidence statements. Appendix C in the original guideline document repeats the recommendations and lists their linked evidence statements.

Training

Recommendation 1

Who is the target population?

Health professionals and support workers who care for children under 5 years and women who may become – or who are – pregnant.

Who should take action?

Professional bodies, skills councils and others responsible for setting competencies and developing continuing professional development programmes for health professionals, nursery nurses and support workers.

What action should they take?

- Professional bodies should ensure health professionals have the appropriate knowledge and skills to give advice on the following:
    - The nutritional needs of women and the importance of a balanced diet before, during and after pregnancy (including the need for suitable folic acid supplements)
    - The rationale for recommending certain dietary supplements (for example, vitamin D) to pregnant and breastfeeding women
    - The nutritional needs of infants and young children
    - Breastfeeding management, using the Baby Friendly Initiative (BFI) training as a minimum standard (www.babyfriendly.org.uk)
    - Strategies for changing people's eating behaviour, particularly by offering practical, food-based advice
- As part of their continuing professional development, train midwives, health visitors and support workers in breastfeeding management, using BFI training as a minimum standard.
- As part of their continuing professional development, train health professionals, including doctors, dietitians and pharmacists, to promote and support breastfeeding, using BFI training as a minimum standard.

Folic Acid

Recommendation 2

Who is the target population?

Women who may become pregnant and women in early pregnancy

Who should take action?

- Primary care trusts (PCTs) and National Health Service (NHS) trusts
- Directors of public health, planners and organisers of public health campaigns
- Pharmacists, general practitioners (GPs), hospital doctors and nurses, particularly those working in gynaecology, sexual health, contraceptive and family planning services, fertility clinics and school health services
- Public health nutritionists and dietitians
- Manufacturers of goods for women of childbearing age

What action should they take?

- Health professionals should:
    - Use any appropriate opportunity to advise women who may become pregnant that they can most easily reduce the risk of having a baby with a neural tube defect (for example, anencephaly and spina bifida)

by taking folic acid supplements. Advise them to take 400 micrograms daily before pregnancy and throughout the first 12 weeks, even if they are already eating foods fortified with folic acid or rich in folate
    - Advise all women who may become pregnant about a suitable folic acid supplement, such as the maternal Healthy Start vitamin supplements
    - Encourage women to take folic acid supplements and to eat foods rich in folic acid (for example, fortified breakfast cereals and yeast extract) and to consume foods and drinks rich in folate (for example, peas and beans and orange juice)
- PCTs should ensure local education initiatives aimed at health professionals include information on the importance of folic acid supplements. They should provide the maternal Healthy Start vitamin supplements (folic acid, vitamins C and D) for eligible women. They should also ensure women who are not eligible for Healthy Start can obtain the supplements from their local pharmacy.
- GPs should prescribe 5 milligrams of folic acid a day for women who are planning a pregnancy, or are in the early stages of pregnancy, if they:
    - (Or their partner) have a neural tube defect
    - Have had a previous baby with a neural tube defect
    - (Or their partner) have a family history of neural tube defects
    - Have diabetes
- Manufacturers should include information with their products on the importance of folic acid supplements before and during pregnancy. Relevant products may include pregnancy tests, sanitary products, contraceptives and ovulation predictor kits.

(See also NICE clinical guideline 63 on diabetes in pregnancy at www.nice.org.uk/CG063 and its antenatal care clinical guideline 62 at www.nice.org.uk/CG062).

Vitamin D

Recommendation 3

Who is the target population?

Pregnant women and breastfeeding mothers.

Who should take action?

- Dietitians, public health nutritionists, midwives, health visitors, GPs, obstetricians and community pharmacists.
- Manufacturers of goods for pregnant and breastfeeding women.

What action should they take?

- Dietitians and public health nutritionists should educate health professionals about the importance of vitamin D supplements for all pregnant and breastfeeding women.

- During the booking appointment at the beginning of pregnancy, midwives should offer every woman information and advice on the benefits of taking a vitamin D supplement (10 micrograms per day) during pregnancy and while breastfeeding. They should explain that it will increase both the mother's and her baby's vitamin D stores and reduce the baby's risk of developing rickets.
- Health professionals should take particular care to check that women at greatest risk of deficiency are following advice to take a vitamin D supplement during pregnancy and while breastfeeding. These include women who are obese, have limited skin exposure to sunlight or who are of South Asian, African, Caribbean or Middle Eastern descent.
- Midwives and health visitors should advise all pregnant and breastfeeding women about the availability of suitable vitamin D supplements such as the Healthy Start vitamin supplements. Women who are not eligible for Healthy Start benefit can obtain the vitamin supplement from their local community pharmacy.
- Manufacturers should include information with their products on the importance of vitamin D supplements during pregnancy and while breastfeeding. Relevant products may include pregnancy tests and breast pumps.
- (See also NICE clinical guideline 62 on antenatal care at www.nice.org.uk/CG062).

Healthy Start

Recommendation 4

Who is the target population?

Pregnant women and parents of infants and children under 4 years who may be eligible for the Healthy Start benefit.

Who should take action?

- PCT commissioners and managers.
- GPs, midwives, health visitors, obstetricians, paediatricians, and community pharmacists.

What action should they take?

- PCTs should promote the Healthy Start scheme.
- PCTs should ensure an adequate supply of both types of Healthy Start vitamin supplements (for women and for children from 6 months to 4 years) is available for distribution by health professionals when they see pregnant women and parents of children under 4 years.
- PCTs should ensure an adequate supply of Healthy Start application forms is available and that the uptake of Healthy Start benefits is regularly audited.
- Health professionals should advise pregnant women and parents of children under 4 years about the Healthy Start scheme. They should ensure all women who may be eligible receive an application form as early as possible in pregnancy.

- Health professionals should use every opportunity they have to offer those parents who are eligible for the Healthy Start scheme practical, tailored information, support and advice on:
    - How to use Healthy Start vouchers to increase their fruit and vegetable intake
    - How to initiate and maintain breastfeeding
    - How to introduce foods in addition to milk as part of a progressively varied diet when infants are 6 months old
- Health professionals should offer the maternal Healthy Start vitamin supplement (folic acid, vitamins C and D) to pregnant women who are (or who may be) eligible.
- GPs and health visitors should offer children's Healthy Start vitamin supplements (vitamins A, C and D) to all children aged from 6 months to 4 years in families receiving the Healthy Start benefit.
- Commissioners should consider distributing the maternal Healthy Start vitamin supplement (folic acid, vitamins C and D) to all women who receive Healthy Start benefit for children aged 1 to 4 years, particularly those who may become pregnant.
- Community pharmacists should ensure the Healthy Start maternal vitamin supplements are available for purchase by women who are not eligible to receive them free of charge.

Diet in Pregnancy

Recommendation 5

Who is the target population?

Pregnant women and those who may become pregnant.

Who should take action?

Midwives, obstetricians, GPs, health visitors and dietitians.

What action should they take?

- Early in pregnancy, discuss the woman's diet and eating habits and find out and address any concerns she may have about her diet.
- Provide information on the benefits of a healthy diet and practical advice on how to eat healthily throughout pregnancy. This should be tailored to the woman's circumstances. The advice should include: eat five portions of fruit and vegetables a day and one portion of oily fish (for example, mackerel, sardines, pilchards, herring, trout or salmon) a week.

Obesity

Recommendation 6

Who is the target audience?

Pregnant women who have a pre-pregnancy body mass index (BMI) over 30, and those with a BMI over 30 who have a baby or who may become pregnant

Who should take action?

Obstetricians, gynaecologists, GPs, midwives, health visitors, nurses, dietitians, those working in contraceptive services or on weight management programmes (commercial or voluntary).

What action should they take?

- Inform women who have a BMI over 30 about the increased risks this poses to themselves and their babies and encourage them to lose weight before becoming pregnant or after pregnancy. Provide a structured programme that:
    - Addresses the reasons why women may find it difficult to lose weight, particularly after pregnancy
    - Is tailored to the needs of an individual or group
    - Combines advice on healthy eating and physical exercise (advising them to take a brisk walk or other moderate exercise for at least 30 minutes on at least 5 days of the week)
    - Identifies and addresses individual barriers to change
    - Provides ongoing support over a sufficient period of time to allow for sustained lifestyle changes.
- Health professionals should refer pregnant women with a BMI over 30 to a dietitian for assessment and advice on healthy eating and exercise. Do not recommend weight-loss during pregnancy.
- Advise breastfeeding women that losing weight by eating healthily and taking regular exercise will not affect the quantity or quality of their milk.

(See also NICE clinical guideline 62 on antenatal care at www.nice.org.uk/CG062 and NICE clinical guideline 43 on obesity at: www.nice.org.uk/CG043).

Breastfeeding

Recommendation 7

Who is the target population?

Pregnant women and breastfeeding mothers.

Who should take action?

Commissioners and managers of maternity and children's service.

What action should they take?

- Adopt a multifaceted approach or a coordinated programme of interventions across different settings to increase breastfeeding rates. It should include:
    - Activities to raise awareness of the benefits of – and how to overcome the barriers to – breastfeeding
    - Training for health professionals

    - Breastfeeding peer-support programmes
    - Joint working between health professionals and peer supporters
    - Education and information for pregnant women on how to breastfeed, followed by proactive support during the postnatal period (the support may be provided by a volunteer)
- Implement a structured programme that encourages breastfeeding, using BFI as a minimum standard (www.babyfriendly.org.uk). The programme should be subject to external evaluation.
- Ensure there is a written, audited and well-publicised breastfeeding policy that includes training for staff and support for those staff who may be breastfeeding. Identify a health professional responsible for implementing this policy.

(See also NICE clinical guideline 37 on postnatal care at www.nice.org.uk/CG037).

Recommendation 8

Who is the target population?

Pregnant women and breastfeeding mothers.

Who should take action?

- Commissioners and managers of maternity and children's services
- PCTs

What action should they take?

- Ensure health professionals who provide information and advice to breastfeeding mothers have the required knowledge and skills.
- Ensure support workers receive training in breastfeeding management from someone with the relevant skills and experience before they start working with breastfeeding mothers.
- Ensure all those who work in maternity and children's services, including receptionists, volunteers and ancillary staff, are made fully aware of the importance of breastfeeding and help to promote a supportive environment.

Recommendation 9

Who is the target population?

Pregnant women and their partners.

Who should take action?

Midwives, obstetricians, GPs and health visitors.

What action should they take?

- Midwives and health visitors should ensure pregnant women and their partners are offered breastfeeding information, education and support on an

individual or group basis. This should be provided by someone trained in breastfeeding management and should be delivered in a setting and style that best meets the woman's needs.
- During individual antenatal consultations GPs, obstetricians and midwives should encourage breastfeeding. They should pay particular attention to the needs of women who are least likely to breastfeed (for example, young women, those who have low educational achievement and those from disadvantaged groups).
- A midwife or health visitor trained in breastfeeding management should provide an informal group session in the last trimester of pregnancy. This should focus on how to breastfeed effectively by covering feeding position and how to attach the baby correctly.

Recommendation 10

Who is the target population?

Breastfeeding mothers.

Who should take action?

Midwives, health visitors, midwifery and health visitor support workers.

What action should they take?

- Ensure a mother can demonstrate how to position and attach the baby to the breast and can identify signs that the baby is feeding well. This should be achieved (and be documented) before she leaves hospital or the birth centre (or before the midwife leaves the mother after a home birth).
- Provide continuing and proactive breastfeeding support at home, recording all advice in the mother's hand-held records.
- Provide contact details for local voluntary organisations that can offer ongoing support to complement NHS breastfeeding services.
- Advise mothers that a healthy diet is important for everyone and that they do not need to modify their diet to breastfeed.
- Do not provide written materials in isolation but use them to reinforce face-to-face advice about breastfeeding.

Recommendation 11

Who is the target population?

Pregnant women and new mothers, particularly those who are least likely to start and continue to breastfeed. For example, young women, those who have low educational achievement and those from disadvantaged groups.

Who should take action?

Commissioners and managers of maternity and children's services.

What action should they take?

- Provide local, easily accessible breastfeeding peer support programmes and ensure peer supporters are part of a multidisciplinary team.
- Ensure peer supporters:
    - Attend a recognised, externally accredited training course in breastfeeding peer support
    - Contact new mothers directly within 48 hours of their transfer home (or within 48 hours of a home birth)
    - Offer mothers ongoing support according to their individual needs. This could be delivered face-to-face, via telephone or through local groups
    - Can consult a health professional and are provided with ongoing support
    - Gain appropriate child protection clearance
- Consider training peer supporters and link workers to help mothers, parents and carers follow professional advice on feeding infants aged 6 months and over. The advice should promote an increasingly varied diet using food of different textures in appropriate amounts (in addition to milk), in response to the baby's needs.

Recommendation 12

Who is the target population?

Breastfeeding mothers.

Who should take action?

Midwives, health visitors, paediatric nurses, nurses working in special-care baby and neonatal units, and nursery nurses.

What action should they take?

- Show all breastfeeding mothers how to hand-express breast milk.
- Advise mothers that expressed milk can be stored for:
    - Up to 5 days in the main part of a fridge, at 4 degrees C or lower
    - Up to 2 weeks in the freezer compartment of a fridge
    - Up to 6 months in a domestic freezer, at minus 18 degrees C or lower
- Advise mothers who wish to store expressed breast milk for less than 5 days that the fridge preserves its properties more effectively than freezing.
- Advise mothers who freeze their expressed breast milk to defrost it in the fridge and not to re-freeze it once thawed. Advise them never to use a microwave oven to warm or defrost breast milk.

<u>Link Workers</u>

Recommendation 13

Who is the target population?

Pregnant women and mothers whose first language is not English, their partners and extended family.

Who should take action?

NHS trusts responsible for maternity care and GP surgeries and community health centres.

What action should they take?

- NHS trusts should train link workers who speak the mother's first language to provide information and support on breastfeeding, use of infant formula, weaning and healthy eating.
- Where link workers are not available, ensure women whose first language is not English have access to interpreting services and information in a format and language they can understand.
- NHS trusts should encourage women from minority ethnic communities whose first language is not English to train as breastfeeding peer supporters.

Infant Formula

Recommendation 14

Who is the target population?

Pregnant women and mothers.

Who should take action?

- Commissioners and managers responsible for maternity, children's and primary care services.
- GPs, midwives, health visitors and pharmacists.

What action should they take?

- Commissioners and managers should ensure mothers have access to independent advice from a qualified health professional on the use of infant formula. This should include information on the potential risks associated with formula-feeding and how to obtain ongoing advice at home.
- Midwives should ensure mothers who choose to use infant formula are shown how to make up a feed before leaving hospital or the birth centre (or before the mother is left after a home birth). This advice should follow the most recent guidance from the department of health (DH) ('Bottle feeding' 2006).
- Avoid promoting or advertising infant or follow-on formula. Do not display, distribute or use product samples, leaflets, posters, charts, educational or other materials and equipment produced or donated by infant formula, bottle and teat manufacturers.

(See also NICE clinical guideline 37 on postnatal care at www.nice.org.uk/CG037).

Prescribing

Recommendation 15

Who is the target population?

Hospital doctors, GPs, obstetricians, pharmacists, specialist nurses, dentists and PCT medicine management teams.

Who should take action?

NHS trusts responsible for maternity care and GP surgeries, community health centres, pharmacies and drug and alcohol services.

What action should they take?

- Ensure health professionals and pharmacists who prescribe or dispense drugs to a breastfeeding mother consult supplementary sources (for example, the Drugs and Lactation Database [LactMed] or seek guidance from the UK Drugs in Lactation Advisory Service (www.ukmicentral.nhs.uk/drugpreg/guide.htm).
- Health professionals should discuss the benefits and risks associated with the prescribed medication and encourage the mother to continue breastfeeding, if reasonable to do so. In most cases, it should be possible to identify a suitable medication which is safe to take during breastfeeding by analysing pharmacokinetic and study data. Appendix 5 of the 'British national formulary' should only be used as a guide as it does not contain quantitative data on which to base individual decisions.
- Health professionals should recognise that there may be adverse health consequences for both mother and baby if the mother does not breastfeed. They should also recognise that it may not be easy for the mother to stop breastfeeding abruptly – and that it is difficult to reverse.

Child Health Promotion

Recommendation 16

Who is the target population?

Parents and carers of infants and pre-school children.

Who should take action?

- NHS trust and PCT commissioners and managers.
- Health visitors, community nursery nurses, the child health promotion programme (CHPP) team and children's centre teams.

What action should they take?

- Commissioners and managers should work with local partners to ensure mothers can feed their babies in public areas without fear of interruption or criticism.
- Health visitors should assess the needs of all mothers, parents and carers with young children. They should provide relevant, early and ongoing support at home for those with the greatest needs, including any that may be the result of a physical or learning disability or communication difficulties.

- Health visitors and the CHPP team should:
    - Support mothers to continue breastfeeding for as long as they choose
    - Provide mothers and other family members with support to introduce a variety of nutritious foods (in addition to milk) to ensure the child is offered a progressively varied diet from 6 months
    - Encourage and support parents and carers to make home-prepared foods for infants and young children, without adding salt, sugar or honey
    - Encourage families to eat together and encourage parents and carers to set a good example by the food choices they make for themselves
    - Advise parents and carers not to leave infants alone when they are eating or drinking.

Recommendation 17

Who is the target population?

Infants and pre-school children.

Who should take action?

- NHS trust and PCT commissioners and managers.
- GPs, paediatricians, midwives, health visitors and community nursery nurses.

What action should they take?

- As a minimum, ensure babies are weighed (naked) at birth and at 5 and 10 days, as part of an overall assessment of feeding. Thereafter, healthy babies should be weighed (naked) no more than fortnightly and then at 2, 3, 4 and 8 to 10 months in their first year.
- Ensure infants are weighed using digital scales which are maintained and calibrated annually, in line with medical devices standards (spring scales are inaccurate and should not be used).
- Commissioners and managers should ensure health professionals receive training on weighing and measuring infants. This should include: how to use equipment, how to document and interpret the data, and how to help parents and carers understand the results and implications.
- Ensure support staff are trained to weigh infants and young children and to record the data accurately in the child health record held by the parents.

(See also NICE clinical guideline 55 on intrapartum care at www.nice.org.uk/CG055).

Allergies

Recommendation 18

Who is the target population?

Pregnant women, mothers and their partners who have a family history of allergy (including eczema, asthma and hay fever).

Who should take action?

Midwives, health visitors, GPs, paediatricians, community dietitians and pharmacists.

What action should they take?

- Advise mothers to feed the baby only on breast milk and to continue breastfeeding while introducing solid foods, when the infant is 6 months. For current dietary advice visit www.eatwell.gov.uk.
- Advise mothers who choose not to breastfeed that there is insufficient evidence to suggest that infant formula based on partially or extensively hydrolysed cow's milk protein helps to prevent allergies.

Oral Health

Recommendation 19

Who is the target population?

Parents and carers of infants and pre-school children.

Who should take action?

Health visitors, GPs, dentists, dental hygienists/assistants, community and day care nursery nurses, home-based child carers and others who work with young children.

What action should they take?

- Encourage parents and carers to:
    - Use a bottle for expressed breast milk, infant formula or cooled boiled water only
    - Offer drinks in a non-valved, free-flowing cup from age 6 months to 1 year
    - Discourage feeding from a bottle from 1 year onwards
    - Limit sugary foods to mealtimes only
    - Avoid giving biscuits or sweets as treats
    - Encourage snacks free of salt and added sugar (such as vegetables and fruit) between meals
    - Provide milk and water to drink between meals (diluted fruit juice can be provided with meals – 1 part juice to 10 parts water)
- Discourage parents and carers from:
    - Adding sugar or any solid food to bottle feeds
    - Adding sugar or honey to weaning (solid) foods
    - Offering baby juices or sugary drinks at bedtime

Pre-School Settings

Recommendation 20

Who is the target population?

Parents and carers of infants and pre-school children.

Who should take action?

Nursery nurses, home-based child carers and others working in pre-school day care settings such as nurseries, crèches and playgroups.

What action should they take?

- Support breastfeeding mothers by:
    - Offering them the opportunity to breastfeed when they wish
    - Encouraging them to bring expressed breast milk in a cool bag
    - Ensuring expressed breast milk is labelled with the date and name of the infant and stored in the main body of the fridge
- Implement DH guidance ('Bottle feeding' 2006) on the preparation and use of powdered infant formula to reduce the risk of infection to infants in care settings.

Recommendation 21

Who is the target population?

Infants and pre-school children up to the age of 5 years.

Who should take action?

Teachers, teaching assistants, nursery nurses, home-based child carers and those working in pre-school day care settings such as nurseries, creches and playgroups.

What action should they take?

- Implement a food policy which takes a 'whole settings' approach to healthy eating, so that foods and drinks made available during the day reinforce teaching about healthy eating.
- Take every opportunity to encourage children to handle and taste a wide range of foods that make up a healthy diet by:
    - Providing practical classroom-based activities
    - Ensuring a variety of healthier choices are offered at mealtimes, and snacks offered between meals are low in added sugar and salt (for example, vegetables, fruit, milk, bread and sandwiches with savoury fillings)
    - Ensuring carers eat with children whenever possible

<u>Family Nutrition</u>

Recommendation 22

Who is the target population?

Families with children aged up to 5 years.

Who should take action?

- Commissioning agencies, local authorities, local strategic partnerships, voluntary agencies and local businesses that fund or provide community projects
- Public health nutritionists and dietitians

What action should they take?

- Public health nutritionists and dietitians should offer parents in receipt of Healthy Start benefit practical support and advice on how to use the Healthy Start vouchers to increase their intake of fruit and vegetables.
- Provide support (both practical and financial) to develop and maintain community-based initiatives which aim to make a balanced diet more accessible to people on a low income. Examples include: food cooperatives, 'cook and eat' clubs, 'weaning parties' and 'baby cafes'.
- Work with local retailers to improve the way fresh fruit and vegetables are displayed and promoted.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type and quality of supporting evidence is identified and graded for each recommendation (see Appendix C in the original guideline document).

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Breastfeeding

- Breastfeeding contributes to the health of the mother and child, in the short and long term:
    - If exclusive breastfeeding for the first 6 months were actively protected, promoted and supported, the health inequalities experienced by mothers and children in low-income families would be reduced.
    - Babies who are not breastfed are many times more likely to acquire infections such as gastroenteritis in their first year. It is estimated that if all UK infants were exclusively breastfed, the number hospitalised each month with diarrhoea would be halved, and the number hospitalised with a respiratory infection would be cut by a quarter.

- Exclusive breastfeeding in the early months reduces the risk of atopic dermatitis. In addition, there is some evidence that babies who are not breastfed are more likely to become obese in later childhood.
- Mothers who do not breastfeed have an increased risk of breast and ovarian cancers and may find it more difficult to return to their pre-pregnancy weight.

Maternal, Infant and Child Nutrition

- The importance of ensuring mothers and their babies are well-nourished is widely recognised. A pregnant woman's nutritional status influences the growth and development of her fetus and forms the foundations for the child's later health. The mother's own health, both in the short and long term, also depends on how well-nourished she is before, during and after pregnancy.
- Women who may become pregnant can most easily reduce the risk of having a baby with a neural tube defect (for example, anencephaly and spina bifida) by taking folic acid supplements.
- Vitamin D supplementation during pregnancy will increase both the mother's and her baby's vitamin D stores and reduce the baby's risk of developing rickets.
- If maternal vitamin supplements were also made available for women with a child between 1 and 4 years, the incidence of neural tube defects and prevalence of rickets could, potentially, be further reduced.
- A child's diet during the early years also impacts on their growth and development. It is linked to the incidence of many common childhood conditions such as diarrhoeal disease, dental caries and iron and vitamin D deficiencies. It may also influence the risk in adult life of conditions such as coronary heart disease, diabetes and obesity.

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

This guidance represents the views of the Institute and was arrived at after careful consideration of the evidence available. Those working in the National Health Service (NHS), local authorities, the wider public, voluntary and community sectors and the private sector should take it into account when carrying out their professional, managerial or voluntary duties.

The guidance complements and supports, but does not replace, National Institute for Health and Clinical Excellence (NICE) clinical guidelines on: antenatal care, diabetes in pregnancy, intrapartum care and postnatal care. It does not give detailed advice on what constitutes a healthy diet. For current dietary advice visit www.eatwell.gov.uk.

Gaps in the Evidence

The Programme Development Group (PDG) identified a number of gaps in the evidence related to the programme under examination, based on an assessment of the evidence. These gaps are set out below.

1. There is a lack of evidence on the effectiveness of interventions targeting specific socio-economic, ethnic, low-income or vulnerable groups. More evidence is also needed on the differential effectiveness of interventions among these groups – and the effectiveness of different components within each intervention.
2. There is a lack of evidence about the effectiveness and cost effectiveness of interventions to improve the nutrition of mothers and children aged under 5, particularly those from disadvantaged, low-income and minority ethnic groups.
3. There is a lack of good quality economic studies on public health interventions to improve nutrition in the UK.
4. There is a lack of well-designed intervention studies on how to:
    - Improve the nutritional status of women before and during pregnancy
    - Enable pregnant women who are obese to reduce the associated health risks for both themselves and their babies
    - Help postpartum women with their nutritional needs and weight
    - Help improve iron intake and reduce salt intake among infants and young children
    - Balance the benefits of improving vitamin D status and the associated risks of increased exposure to the sun.
5. There is a lack of studies that have adequately measured and validated nutrition levels before and after an intervention. Studies too often rely on self-reported information alone. In addition, few studies include measured dietary change as an outcome measure (many rely on surrogate measures such as the baby's birth weight, which can be affected by confounding.)
6. There is a lack of intervention studies and evaluations providing process and qualitative data. This is needed so that the effective components of an intervention can be assessed and replicated on a wider scale.
7. There is a lack of well-designed studies that have evaluated the use of food vouchers to encourage healthy eating.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

The National Institute for Health and Clinical Excellence (NICE) guidance can help:

- National Health Service (NHS) organisations meet Department of Health (DH) standards for public health as set out in the seventh domain of 'Standards for better health' (updated in 2006). Performance against these standards is assessed by the Healthcare Commission, and forms part of the annual health check score awarded to local healthcare organisations.
- NHS organisations and local authorities (including social care and children's services) meet the requirements of the government's 'National standards, local action, health and social care standards and planning framework 2005 to 2008 and the 'Joint planning and commissioning framework for young people children and maternity services 2006'.

- National and local organisations within the public sector meet government indicators and targets to improve health and reduce health inequalities.
- Local authorities fulfill their remit to promote the economic, social and environmental wellbeing of communities.
- Local NHS organisations, local authorities and other local public sector partners benefit from any identified cost savings, disinvestment opportunities or opportunities for re-directing resources.
- Provide a focus for children's trusts, health and wellbeing partnerships and other multi-sector partnerships working on health within a local strategic partnership.
- NICE has developed tools to help organisations implement this guidance. These are available on website at www.nice.org.uk/PH011. See also "Availability of Companion Document" field.

Section 1 of the original guideline document lists the six recommendations that have been identified as key priorities for implementation, on the basis of these criteria:

- Impact on health inequalities
- Impact on health of the target population
- Balance of risks and benefits
- Cost effectiveness
- Ease of implementation
- Speed of impact

Refer to the "Major Recommendations" field for these recommendations under the following topics: Healthy Start (recommendation 4), training (recommendation 1), vitamin D (recommendation 3), breastfeeding (recommendations 7 and 11), and folic acid (recommendation 2).

IMPLEMENTATION TOOLS

Audit Criteria/Indicators
Quick Reference Guides/Physician Guides
Resources
Slide Presentation

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

National Institute for Health and Clinical Excellence (NICE). Improving the nutrition of pregnant and breastfeeding mothers and children in low-income households. London (UK): National Institute for Health and Clinical Excellence (NICE); 2008 Mar. 105 p. (Public health guidance; no. 11). [48 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

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2008 Mar

GUIDELINE DEVELOPER(S)

National Institute for Health and Clinical Excellence (NICE) - National Government Agency [Non-U.S.]

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National Institute for Health and Clinical Excellence (NICE)

GUIDELINE COMMITTEE

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NICE Project Team

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) format from the National Institute for Health and Clinical Excellence (NICE) Web.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Maternal and child nutrition. Quick reference guide. London (UK): National Institute for Health and Clinical Excellence (NICE); 2008 Mar. 20 p. (Public Health Intervention Guidance 11). Available in Portable Document Format (PDF) from the National Institute for Health and Clinical Excellence (NICE) Web site.

- Maternal and child nutrition. Presenter slides. London (UK): National Institute for Health and Clinical Excellence (NICE); 2008. 15 p. (Public Health Intervention Guidance 11). Available in Portable Document Format (PDF) from the NICE Web site.
- Costing statement: maternal and child nutrition. London (UK): National Institute for Health and Clinical Excellence (NICE); 2008. 6 p. (Public Health Intervention Guidance 11). Available in Portable Document Format (PDF) from the NICE Web site.
- Methods for development of NICE public health guidance. London (UK): National Institute for Health and Clinical Excellence (NICE); 2006 Mar. 131 p. Available in Portable Document Format (PDF) from the National Institute for Health and Clinical Excellence (NICE) Web site.
- The public health guidance development process. An overview for stakeholders including public health practitioners, policy makers and the public. London (UK): National Institute for Health and Clinical Excellence (NICE); 2006 Mar. 46 p. Available in Portable Document Format (PDF) from the National Institute for Health and Clinical Excellence (NICE) Web site.
- Guidance to improve the nutrition of pregnant and breastfeeding mothers and children in low income households for midwives, health visitors, pharmacists and other primary care services. Evidence summaries. Available from the National Institute for Health and Clinical Excellence (NICE) Web site.
- Maternal and child nutrition: modelling the cost effectiveness of breastfeeding. London (UK): National Institute for Health and Clinical Excellence (NICE); 2008 Mar. 24 p. Available in Portable Document Format (PDF) from the National Institute for Health and Clinical Excellence (NICE) Web site.
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Print copies: Available from the National Health Service (NHS) Response Line 0870 1555 455. ref: N1489. 11 Strand, London, WC2N 5HR.

PATIENT RESOURCES

None available

NGC STATUS

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